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(54) Surgical clamping mechanism

(57) A surgical instrument which has a frame, an elongated shaft, an end effector with first and second jaws for clamping tissue, a post cooperatively engaged with the proximal end of the second jaw received in a slot on the sidewall of a channel included as part of the first jaw, a pusher member affixed to the proximal end of the second jaw, and an actuator to effect movement of the pusher member from a forward position to a rearward position, is disclosed. When the pusher member moves rearwardly, the post rides in the slot in the sidewall and the second jaw moves from a closed position where it is adjacent the first jaw for clamping tissue to an open position for placing tissue between the jaws.

The combination of cooperating elements of the instrument provides a convenient and simple mechanism for clamping or grasping tissue between the jaws. This mechanism decreases the force necessary to clamp the tissue and utilizes more of the effective length of the second jaw. These benefits in turn make it easier for the user of the instrument to clamp tissue and reduces the tendency of the second jaw to flex or twist during clamping, therefore providing the user with even greater control over the surgical procedure. Overall, the clamping or grasping mechanism incorporated into the surgical instrument provides an attractive alternative to the conventional prior art mechanisms for accomplishing these functions.

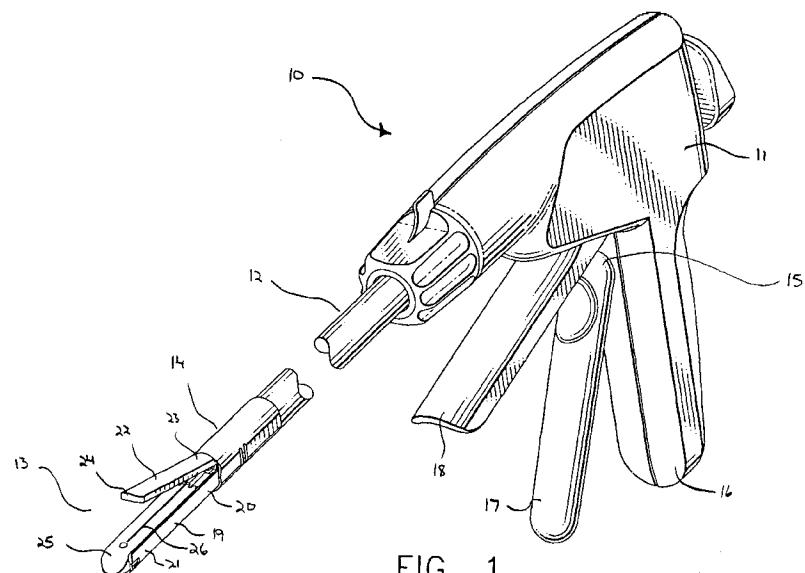


FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 6826

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 4 712 545 A (HONKANEN) * the whole document *	1,5,6	A61B17/072
Y	---	3,7-10	
Y,D	US 5 040 715 A (GREEN ET AL.) * abstract; figures 1,15A,15B,24 *	3	
Y	WO 94 24947 A (MINNESOTA MINING & MANUFACTURING COMPANY) * page 18, line 33 - page 22, line 16; figures 1,16-18 *	7-10	
A	US 5 431 674 A (BASILE ET AL.) * abstract; figures *	1	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)			
A61B			
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	10 April 1997	Giménez Burgos, R	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			